

Seattle Transportation

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Paul Schell, Mayor Daryl Grigsby, Director

STREET AND SIDEWALK PAVEMENT OPENING AND RESTORATION RULES



Seattle Transportation Director's Rule 94-8 February 1998 Rev. 1

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SEATTLE TRANSPORTATION

STREET AND SIDEWALK PAVEMENT OPENING AND RESTORATION RULES

Pursuant to the Seattle Municipal Code, Section 3.44.030, the Director of Transportation, hereby adopts the following rules to provide for uniform application of standards and workmanship in the removal and restoration of streets, alleys, sidewalks and special pavements in public places; to assure the integrity of the street infrastructure by restoring the street to pre-construction conditions or better.

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1. PURPOSE:

- 1.1. The establishment of rules for removal of pavement and subsequent restoration that shall be done in accordance with the requirements herein and special provisions as deemed necessary by the Director, and identified documents supporting these rules.
- 1.2. It is the intent of these rules to define terms consistent with the various statutes, ordinances, codes and manuals which govern the particular item.

2. ADMINISTRATION:

2.1. The Director of Transportation shall administer the Street and Sidewalk Pavement Opening and Restoration Rules under the authority of the Seattle Municipal Code (SMC), Title 15 and Title 21, Chapter 21.16. Permittees/contractors excavating in street area must comply with the terms of these rules.

3. **DEFINITIONS**:

A.D.A.: Americans with Disabilities Act.

Aggregates, Mineral: As defined in the Standard Specifications (Division 9).

Alley: A roadway not designed for general travel and primarily used as a means of access to the rear of residences and business establishments.

Arterial: Every street, or portion thereof, designated as such in The City of Seattle Official Traffic Code.

Asphalt/Flexible Base: Any asphaltic or bituminous surface placed on a base constructed of native material, aggregates or ATB (asphalt treated base) as defined in the Standard Specifications (Division 5).

Asphalt/Rigid Base: Any asphaltic or bituminous surface placed on a base constructed of concrete or stone/masonry type pavement or any combination of the two. (Standard Specification Division 5)

Asphaltic and Bituminous: As defined in the Standard Specifications Divisions 5 & 9.

Backfill: As defined in the Standard Specifications Divisions 2, 7 and 9.

Bus Routes: Those streets upon which scheduled public transit routes are maintained, including the turn around streets.

Central Business District (**CBD**): The portion of the city bounded on the north by Denny Way; on the east by I-5 and Boren Avenue (northerly portion); on the south by South Royal Brougham Way; on the west by Elliott Bay.

Cold Mix Asphalt: Any asphaltic concrete mixture designed to be placed at ambient temperature without the addition of heat, such as MC 250. See Standard Specification 9-02.

Concrete: Portland Cement Concrete (PCC).

Concrete Paving Panel: The contiguous surface bounded by joints in a concrete surface street.

Construction Fabric: A synthetic durable woven or non-woven fabric, placed under the surface patch for the purpose of waterproofing and/or retarding reflective cracking. ("Phillips Petrotac" or equivalent.)

Also, see Geotextiles.

Contractor: An individual, partnership, corporation, firm or joint venture contracting with an owner or permittee to do work within the street right-of-way.

Cut: An opening in a paved surface for the installation or maintenance of a utility.

Cut Size:

Standard: See Standard Cut.

Small: Less than 200 sy or less than 239 L.F. for trenches. Large: 200 sy and greater or 240 L.F. and greater for trenches.

Decorative/Special Pavements: Any surface composed of cobblestones, paving stones, brick, unit pavers, tiles, concrete colored by additives, proprietary products, and/or any other special surface treatments, e.g., exposed aggregate. Replacement materials identical to the removed materials must be on the job site or in the contractor's possession prior to the start of work. If no source can be located an equivalent substitute may be considered with approval of the City or private owner of the improvement.

Department: Seattle Transportation.

Deterioration, Premature: With reference to concrete paving panels, this pertains to panels that will exhibit evidence of failure before they have attained their design life.

Deterioration, Severe: With reference to concrete paving panels, this pertains to panels that show movement when loads are imposed upon them, or panels that are so extensively cracked that such movement is imminent.

Director: The Director of Seattle Transportation, or his/her duly authorized agent.

Driveways: A well defined surface providing vehicular access to adjacent property from a city-maintained street.

Dust Oil Roadway: A gravel street that has been oiled for dust control only.

Historic Landmark District: Any district designated or created by City ordinance as a Landmark District. (Contact the Department of Neighborhoods, Urban Conservation Division, 684-0228.)

Historic Preservation Offices: See: Appendix N.

Inspection, Full-time: It is intended that the inspector be on the job site at all times, but that he/she will exercise reasonable judgment to assure inspection of critical items in a timely manner. An inspector must have some latitude in decisions about the time spent on each site.

Intersections: The area bounded by the projection of the right-of-way lines where streets cross.

Lane Line: A solid or broken paint line or other marker line separating lanes of traffic moving in the same direction.

Noise: See Seattle Noise Ordinance.

Non-Arterials: All streets not defined as arterials.

Oil Mat: Any surface composed of dirt and rock which has had "road oils" or asphaltic liquids applied as dust control.

One Call: A centralized telephone number connected to a locating service which provides underground utility locations. One Call is required by R.C.W. 19.122.

Pavement Opening: This is a generic term that includes any pavement removal to allow access below the pavement.

PCC Panel - Excellent: A concrete panel which does not have cracks or patches. Surface imperfections are allowed. See: Appendix M.

Permittee/contractor: An individual, firm, contractor, corporation or company authorized by permit to work in the street right-of-way.

Portland Cement Concrete (PCC): A mixture of portland cement, aggregate, sand and water, with or without additives.

Right(s)-of-way: Land, property or property interest, secured and reserved to the public for transportation, utility services, drainage, sidewalks or other public purpose.

Sidewalk: The paved area in the public right-of-way intended for pedestrians.

Shoulders of the Road: That portion of the right-of-way adjacent to an improved driving surface without curbs.

Stabilized and Sealed Surfaces: Any asphaltic surfaced street composed of a layer one (1) inch minimum of an asphaltic mix and covered with one or more, three-eighths (3/8) inch chip seal wearing course(s).

Standard Locations: See Standard Plan 030.

Standard Specifications: Comprises the current editions of The City of Seattle, Standard Specifications for Road, Bridge, and Municipal Construction and The City of Seattle, Standard Plans for Municipal Construction.

Standard Street Cut: Any opening in any paved driving "surface" where the area is eighteen (18) square feet or less and where the depth of excavation is six (6) feet or less below grade.

Street: See Right(s)-of-way.

Street area: That portion of the right-of-way improved for vehicular travel and use.

"T" Cut: The removal of an asphalt overlay on a rigid base from the edges of a cut for a specified distance.

Unimproved Right-of-Way: The public right-of-way which has not been improved for pedestrian or vehicular travel.

Utility Coordinating Committee: A committee composed of the City of Seattle Public Utilities, City Light, Seattle Transportation and the private utilities which meets bi-monthly to provide information on upcoming projects for coordination of construction activities.

4. REFERENCES:

- 4.1. These rules incorporate the following documents:
- 4.1.1. Seattle Municipal Code (SMC), Title 15.26, 15.32, Title 21, Chapter 21.16, and Ordinance 118751.
- 4.1.2. The City of Seattle Standard, Specifications for Road, Bridge, and Municipal Construction.
- 4.1.3. The City of Seattle, Standard Plans for Municipal Construction
- 4.1.4. The City of Seattle, Official Traffic Code (Seattle Municipal Code (SMC) Title 11).
- 4.1.5. The City of Seattle, Traffic Control Manual for In-Street Work.

5. GENERAL PROVISIONS:

- **5.1. APPLICATION OF RULES:** These rules apply to any public or private organization, contractor, or individual who excavates in the public right-of-way.
- **5.2. PUBLIC PROTECTION:** Measures to protect the public shall conform to the Traffic Control Manual for In-Street Work and any special provisions stipulated by the Director.
- **5.3. QUALITY OF CONSTRUCTION:** All work done in the street area shall be performed with diligence in a timely manner and conform to standards of the City of Seattle.
- **5.4. STANDARD SPECIFICATIONS:** All street and sidewalk restoration shall be done in accordance with the Seattle Standard Specifications as amended by any special provisions for the project approved by the Director.
- **5.5. INTEGRITY OF PANEL:** It is the intent of the City that, when trench-width-only restoration of a concrete panel would result in premature deterioration, either partial or complete panel replacement beyond the trench dimensions will be required, in accordance with the provisions below, or as directed by the Director. In no case will any panel be restored to more than two pieces.
- **5.6. CONSTRUCTION METHODS:** The methods used for removal and restoration shall be governed by these rules.
- **5.7. ALTERNATIVE METHODS:** It is the policy of the City of Seattle and Seattle Transportation to encourage innovative techniques and new technologies in the removal and restoration of street and sidewalk pavements. To that end, the Director may, on a case-by-case basis, waive certain specific requirements of this policy, when such action would effectively advance a new technology and/or state of knowledge. The burden of testing or otherwise demonstrating that a new technique is likely to be effective rests with the permittee/ contractor.
- **5.8. SPECIAL TESTING:** On large projects, the Director may require non-destructive testing of pavements prior to removal, as a means of determining the extent of needed restoration. This testing shall be at the expense of the permittee/contractor.
- **5.9. APPROVAL OF MATERIALS:** All materials used shall conform to the Standard Specifications. The Director may require that samples of materials and/or source documentation for materials be furnished. The City Materials Laboratory must approve all materials.

- **5.10. RESTRICTED AREAS:** No work will be allowed in the following areas from Thanksgiving Day through January 1, except under special conditions authorized by the Director and except emergencies which pose immediate threat of property damage, personal injury or loss:
- **Central Retail Shopping District:** Area bounded by Seneca Street, 1-5 Freeway, Denny Way, Virginia Street and 1st Avenue:
- **Pioneer Square District:** Area bounded by Columbia Street, 2nd Avenue, 2nd Avenue South, South King Street and Elliott Bay.
- **5.11. HISTORIC DISTRICTS:** Before any work can be done in a Historic Landmark District, the Historic Preservation Officer (See Appendix N) must be notified. Emergency work is exempt from this requirement, but in no case shall permanent pavement restoration be done without such notification.
- **5.12. PAVEMENT MARKINGS:** Pavement removal street markings made in public places shall be identified by a painted triangle, inside of which shall be placed four (4) inch letters as set forth in Appendix A.
- **5.13. COLLATERAL DAMAGE:** Except as provided in Revised Code of Washington (RCW) 19.122.030, any damage or destruction to existing public or private facilities done during the course of work shall be repaired or replaced at the permittee's/contractor's expense. This includes destruction of all traffic devices and obliteration of all lines or bars. The Director shall determine the extent of damage and shall order the extent and type of repair, except as provided in RCW 19.122.030.
- **5.14. ADDITIONAL WORK:** In some cases of street restoration by Seattle Transportation forces, Seattle Transportation may elect to remove and replace pavement beyond the limits required by these rules. When this is done, this discretionary removal and replacement will be separately identified on all documents and will not be charged to the permittee/contractor.
- **5.15. DECORATIVE/SPECIAL PAVEMENT STREETS AND SIDEWALKS:** The quality and workmanship of restoration shall be equal to or greater than that of the original project. The process of restoration will be under the close direction of the Director to assure that the special design standards are met.
- **5.16. CONSTRUCTION EQUIPMENT IDENTIFICATION:** All equipment at a construction site must be conspicuously marked with the operating company name and phone number.
- **5.17. CONSTRUCTION NEXT TO CITY STRUCTURES:** Work next to or within 25 feet of any City structure, bridge, retaining wall, rockery or stairway shall be reviewed for approval by the Roadway Structures Section of SEATRAN prior to the start of any excavation or removal.
- **5.18. ONE CALL:** A minimum of 48 hours prior to any excavation the permittee/contractor must call the One Call Location Service at 1-800-424-5555. Ref.: R.C.W. 19.122
- **5.19. COORDINATION OF WORK:** Prior to commencing any work in street area plans of the proposed work must be submitted to the Street Use Office for review and a permit issued for the work. Emergency work is exempt from this prior notification and a permit must be obtained the next working day.
- **5.20. PAVING REMOVAL AND RESTORATION PLANS:** Plans showing the proposed removal and restoration of the pavement must be submitted for review and approval prior to the issuance of the permit for all large cuts or projects.

6. GENERAL RESPONSIBILITY:

6.1. RESPONSIBILITY FOR COST OF REPAIR, CLEAN-UP AND/OR RESTORATION: The permittee/contractor is responsible for reimbursement of the City's costs incurred resulting from repair or restoration of cuts, except as provided in Section 9.5. The permittee/contractor shall be responsible for erosion and sediment control at the construction site, as required by the Seattle Municipal Code (SMC 22.800). The site and the surrounding area shall generally be kept clean and free of construction debris or other material, such as mud, dust, chunks of soil, pieces of wood, wire, etc. Such materials as mud, soils, cutting slurry etc. shall be collected and disposed of at an appropriate disposal site. These materials shall not be washed or flushed into an inlet, catch basin or other drainage system. (See joint Director's Rules, DCLU Rule 6-93 and Seattle Transportation Rule 93-2, for additional information.) All backfill of excavations done by the permittee/contractor shall be guaranteed by the permittee/contractor until the street is reconstructed or resurfaced.

7. EXCAVATION:

<u>General:</u> All excavation shall be done in accordance with all City and State specifications and standards. All excavations shall be kept to the minimum required for the work.

- **7.1. Undercutting:** Excavation or sloughing of material beyond the vertical plane of the cut (i.e., undercutting) shall not be allowed, except where permission to undercut has been granted by the Director. If such undercutting occurs, it may be necessary that the affected pavement above be removed in accordance with these rules. CDF backfill of minor undercut areas may be permitted per Section 7.4.1.
- **7.2. Alternative excavation methods:** Excavation in street area more than four (4) feet deep must be shored to provide lateral support to streets and utilities. If a permittee/contractor believes there are exceptional conditions where it would be feasible to excavate so the earth is sloped to the angle of repose, permittee/contractor shall make a written request for permission from the Director to do so, stating his/her exceptional conditions. If permission is granted, the permit shall so indicate. Excavation in street area must conform to State and Federal safety standards.
- **7.3.** Cut and tunnel: Cut and tunnel will only be permitted with prior approval by the Director.
- **7.4. Disposal of materials:** Permittee/contractor shall be responsible for the disposal of excavated material. The City does not provide disposal sites. Permittee/contractor shall secure their own disposal site.
- **7.5. Open Excavations:** When backfilling operations cannot be completed by the end of the authorized work shift, steel plates (meeting the requirements below) may be used to temporarily cover the excavation. Each steel plate shall be identified with permittee's/ contractor's name. Steel plates must be installed such that there will not be any rocking, noise, hammering or shaking of adjacent property.

7.6. Steel plates:

- a. The steel plates shall have a minimum of twelve (12) inches bearing width on all sides of a cut in rigid pavement. Additional bearing width may be required for non-rigid paved streets and areas where the pavement has been undercut.
- b. Plates shall be anchored to minimize shifting, using one of the methods listed below:
- (1) Steel pins shall be driven on at least two sides of the plate (pins shall not be used on weekends on bus routes), or,

- (2) Flanges or angle irons welded to the underneath side shall basically conform to the size of the street opening, or,
- (3) Any equal or better method approved by the Director shall be acceptable.
- c. Where the street surface is uneven, plates will be bedded on MC-250 asphaltic mix or approved material. Transition shims shall be provided to allow ease of traffic movement over the plate.
- d. Steel plates shall be capable of carrying a minimum of H-2O loading.
- e. Steel plates shall be coated with non-skid paint or other material to prevent slipping or skidding.
- f. Steel plates shall be removed from the job site within 24 hours of notification by Seattle Transportation.
- **7.6.1.** Use of permittee's/contractor's steel plates: When the permittee/contractor uses steel plates to cover the excavation prior to backfilling and restoration, the plates shall remain over the excavation. Department crews will have the use of these plates until the backfill and pavement restoration work is completed. Upon completion of the restoration, the permittee/contractor shall then remove the plates within 24 hours of notification from Seattle Transportation. The use and removal of the plates will be at no cost to the City.
- **7.6.2.** Crosswalks to be kept open: All steel plates lying in pedestrian crosswalks or within three (3) feet of pedestrian crosswalks shall meet the current requirements of the ADA for temporary walking surfaces.
- **7.6.3.** The zone of influence may require removal and restoration of additional pavement: Whenever the zone of influence of the excavation, as evidenced during site inspection or by engineering calculations, extends beyond the pavement removal, and when required by the Director, the removal and restoration of the adjacent pavement will be required to the limit of the zone of influence and/or damaged or undermined pavement and in accordance with these rules. (See Appendix K.)

8. BACKFILL MATERIALS:

General: Backfilling materials and processes shall comply with City of Seattle Standards.

- **8.1. Controlled Density Backfill (CDF):** Backfilling, using Controlled Density Backfill is the preferred backfill method. The mix shall be ordered in compliance with the mixtures described in Appendix B. Immediately prior to unloading, the load shall be rapidly mixed. Unloading shall be at a rate fast enough to prevent segregation of the mix to prevent shear and/or coating damage to the utility. The Controlled Density Backfill shall be directed in such a manner that it flows up around the utility, thereby providing adequate support. Care shall be exercised to direct the Controlled Density Backfill in such a manner that will not cause the utility to float from its support, displace the bedding sand nor cause the trench wall to collapse. Alternative backfill mixes may be permitted with approval of the Director.
- **8.2. Special Backfill Materials:** Other special materials, such as pervious or thermally conductive fill material, may be required on a site-by-site basis. See Appendix B for alternatives. Note: CDF shall not be used within ten feet of any steam line. Contact Seattle Steam or any other steam supplier for specifics for protection of the steam lines.
- **8.3. Suitable backfill material:** On large projects the Director shall determine at the start of the job whether the original material is suitable for backfill. However, should rain or other weather conditions make it unsuitable, the Director may require its removal at any time during the progress of the work and require select material for backfill. All material used for backfill shall be free from large or frozen lumps, wood, or other extraneous matter. (Seattle Standard Specifications 7-17.3(3)A.) The back-fill shall be

compacted to ninety-five percent (95%) of the maximum density determined by the "Compaction Control Test" specified in the Standard Specification 7-17.3(3)B. Backfill of minimal undercutting may be permitted by the Director when CDF is used.

- **8.4. Mechanical compaction of backfill:** At locations where paved streets, driveways, or sidewalks will be constructed or reconstructed over the cut, or as requested by the Director, the backfill shall be compacted by mechanical means, except as provided in Sections 8.3. above and 8.6. below.
- **8.5.** Crushed rock over native or granular fill material: A minimum of six (6) inches of compacted crushed rock shall be placed under the surface patch of the repair. (See Standard Specifications, Section 4-04.3.)
- **8.6.** Water settling backfill: Water settling backfill is not allowed, unless the Director gives prior written authorization for a specific project, e.g., around the perimeter of deep City Light or telephone company vaults. Water settling shall not be allowed within ten (10) feet of a steam line.
- **8.7.** Utility cuts backfilled without City inspection: Where street cuts are backfilled without City inspection, a temporary patch shall be placed by the permittee/contractor using a minimum of two (2) inches of MC 250 asphaltic mix or substitute approved by the Director. The backfill shall be guaranteed by the permittee until such time as the street is reconstructed or repaved. Any backfill failures/subsidence which causes a surface deformation will be repaired by City forces at the permittee's expense. The final restoration shall be accomplished by the Department at the permittee's/contractor's expense.
- **8.8. BACKFILL BY THE CITY:** Backfill and restoration of excavations in street and alley pavements shall be performed by Seattle Transportation (at the expense of the permittee/contractor making the excavation), except when performed under the following conditions or types of street areas:

8.8.1. Standard street cut:

- a. All backfill will be guaranteed not to subside until such time as the street is reconstructed or resurfaced.
- b. The street cut measures eighteen (18) square feet or less and not exceeding six (6) feet in depth.
- c. In crushed rock, gravel, dust oil or oil mat roadways.
- d. Work performed by the contractor, under full-time City inspection paid by the permittee/contractor and authorized in writing prior to permit issuance by the Director.
- e. Street area being improved under a City Public Works Contract.
- f. Private street improvements where construction is bonded or under special circumstances.
- **8.9. Backfill and restoration adjacent to City maintained structures:** Restoration of any cut adjacent to any City maintained structure (e.g. bulkhead, bridge footings, etc.) shall be performed by Seattle Transportation, unless otherwise authorized by the Director.
- **8.10. Shoulders of the road:** Backfill shall be covered with a minimum of 4 inches of Mineral Aggregate Type 2 and 2 inches of Mineral Aggregate Type 1.
- **8.11. Walkways:** To include concrete walks, asphalt walks, bikeways and pathways.
- 8.12. Unimproved rights-of-way: See Section 11.

- **8.13. Alleys:** All alley surfaces, except longitudinal cuts in PCC panels.
- 8.14. Driveways or other non-street areas to be paved.
- **8.15. SPECIAL BACKFILL MATERIAL:** Free-draining backfill material may be required due to slopes, soils conditions, water tables or other situations on a site-by-site basis. Other materials may be required on a site by site basis.
- **8.16. EMERGENCY AND SPECIAL BACKFILL:** In EMERGENCY SITUATIONS, or where it is necessary to reopen the street to traffic, or upon special request by the permittee/contractor, backfill of the excavation by the permittee/contractor may be allowed with permission of the Director. In such situations, the permittee/contractor must make every reasonable effort to obtain authorization from the Director before proceeding to back-fill. When backfill and/or pavement restoration is accomplished by the permittee/contractor or other parties with or without City approval or control, the permittee/contractor shall guarantee the integrity of the backfill and pavement restoration until the street is reconstructed or resurfaced. In the event of failure or severe deterioration as defined in this policy, Seattle Transportation will make the necessary repairs at the expense of the permittee/contractor. If it can be shown to the satisfaction of the Director that the failure or severe deterioration was substantially caused by factors beyond the control of the permittee/contractor, this guarantee shall not apply.

9. SURFACE RESTORATION:

9.1. TEMPORARY SURFACE:

- **9.1.1. Temporary patches:** If temporary patches are required to maintain traffic or pedestrian travel, the permittee/contractor shall install and maintain a two-inch (2") thick patch of MC 250 asphalt material over a minimum of two-inches (2") of crushed rock or, optionally, a three-inch (3") thick patch of MC 250 asphalt material. (Refer to Standard Specifications, Section 5-07.3(6)d.) For large projects these requirements may be amended or expanded at the discretion of the Director.
- **9.1.2. Responsibility for temporary patches:** When temporary asphaltic patches are allowed or required by this rule, they must be compacted flush with the adjoining permanent pavement, and must be maintained in a good condition, at grade, until such time as a permanent patch is placed. Any settlement of the backfill under the patch is the responsibility of the permittee/contractor until the street is reconstructed or repaved.
- **9.1.3. Responsibility for temporary patch failures:** The Director will respond to all complaints of patch failures or patches placed incorrectly by making permanent repair. Patches, less than 60 days old, will have the subbase removed and replaced prior to permanent repair. The permittee/contractor will be billed at a surcharge rate to cover the costs and for inefficiency of having to perform unscheduled work. For those over 60 days, the permittee/contractor will be billed at the standard restoration rate.

9.2. INTERIM SURFACES:

9.2.1. Interim Pavements: Interim pavements may at times be required by the Director. When an interim pavement is required, the Director will supply special provisions and specifications. Interim pavements may be required on large projects which will have an extended time period between the opening of the pavement and the final restoration.

9.3. PAVEMENT RESTORATION:

- **9.3.1. Pavement restoration:** All pavement restoration shall be pursuant to Standard Plans and Specifications, Section 5, and any special provisions required by the Director.
- **9.3.2. Direction of Cuts:** Final restoration of cuts shall be made parallel and/or perpendicular to longitudinal and transverse joints.
- **9.3.3.** Longitudinal joint tie bars and transverse joint load transfer dowels: Any existing tie bars or load transfer dowels damaged during the construction process shall be replaced. Longitudinal joint tie bars and/or transverse joint load transfer dowel bars (size, spacing, and installation of bars shall be per Appendix D. of these rules and per the Standard Specifications, Standard Plan 405.1) shall be required at the joints of PCC panels whenever two (2) or more panels are being replaced under any of the following locations:
- a. On all arterial streets;
- b. In the Central Business District:
- c. On bus routes;
- d. Under special conditions when required by the Director.

9.4. P. C. C. PAVEMENT REMOVAL AND RESTORATION:

GENERAL:

- **9.4.1. Removal of pavement:** New concrete pavement shall not be cut for at least three (3) years following the paving, except in an emergency or when prior approval has been granted by the Director.
- **9.4.2. General neatness:** When pavement is removed, the remaining edge shall be neat, straight, and perpendicular to the base. Cuts shall be parallel and perpendicular to the center line of the roadway.
- **9.4.3. Protection of tie bars and load transfer dowels:** During the removal of concrete panels, precautions must be taken not to damage load transfer dowels and tie bars or break out the concrete paving under the dowels or tie bars on the adjoining panel. Damage of the adjoining panel will require its replacement. Note: Concrete pavements constructed after 1982 have load transfer dowels and tie-bars. The dowels and tie-bars can be located with a metal finding device.
- **9.4.4. Removal Methods:** The permittee/contractor shall not proceed with pavement removal until it has been demonstrated, to the satisfaction of the Director, that the method to be used to break and remove the concrete pavement will not damage the existing utilities, or pavement that is to remain in place. Standard cuts shall only be done in one panel; any damage to abutting panels will require the removal and replacement of all the panels cut or damaged at the permittee/contractor's expense.
- **9.4.5.** Alternate method of pavement removal: Owners of existing utilities may require that an alternate method of pavement removal be used if owner(s) believe that the proposed standard method of pavement removal (drop hammer, backhoe pavement breaker, jackhammer) may jeopardize their utilities. The extra cost of removal will be the responsibility of the permittee/contractor. On City of Seattle Transportation paving rehabilitation projects the owner of the utility is responsible for any additional costs associated with requested extra removal requirements.

9.5. PANEL REPLACEMENT DETERMINATION:

- **9.5.1. Full concrete panel replacement:** For concrete surface streets, the minimum restoration shall be full panel replacement if one or more of the following conditions exist:
- a. Panels fifteen (15) years old and less: On any Arterial street or bus route any panel less than fifteen (15) years old will require full panel replacement. On any non-arterial any panel less than fifteen (15) years old may require full replacement for locations in-between intersections; at intersection full panel replacement will be required.
- b. Removal of 40% of a panel: In any panel where the cut removes (or requires removal of) more than forty percent (40%) of the panel.
- c. Central Business District (CBD) and arterials: Where a cut or multiple cuts are made during the installation or repair, that accumulate an area of more than twenty-four (24) square feet of any panel, on any street in the Central Business District, or any arterial or bus route, the panel is to be replaced.
- d. Excellent condition panels: On any panel whose preconstruction condition is "excellent" based on visual inspection and/or where recommended in a consultant report based on non-destructive testing. Visual inspection will be done using the City's Pavement Management System protocol for rating concrete pavement. (See Appendix M).
- e. Diagonal Cuts: Any diagonal cut will require full panel replacement.
- f. Cut leaving a panel in three (3) pieces: where the proposed cut will leave a panel in three or more pieces the whole panel shall be removed and replaced.
- g. Transverse Cuts: Any trenching that transverses any arterial.
- **9.5.2. Partial concrete panel replacement:** Where partial panel replacement is allowed, additional pavement replacement beyond the cut or trench line will be required under the conditions stated below.
- **9.5.3. Standard cuts:** Cuts falling within the limits of the standard cut definition and not within three (3) feet from a longitudinal joint or five (5) feet from transverse joint, other patches or any cracks, may be patched to its initial size.
- **9.5.4. Minimum cut size for trench type patches:** The minimum restoration in a pavement panel shall be three (3) feet in width in the longitudinal direction and five (5) feet long in the transverse direction.
- **9.5.5.** Additional panel removal: If the cut is less than three (3) feet from a longitudinal or five (5) feet from a transverse joint or other patches or cracks, the intervening portion of the panel must be removed.
- **9.5.6. Pavement panels with curbs:** If the edge of the cut is less than twenty-four (24) inches from the face of a curb, the intervening portion of the panel and curb must be removed and replaced, unless an exception is granted by the Director.
- **9.5.7. Patches on edge of panel without curbs:** Patches on the longitudinal (outside) edge of a panel shall be a minimum of three (3) feet in width.
- **9.5.8.** Additional responsibility: If any pavement between the cut and the nearest joint, crack, or cut, as described above, becomes disturbed or unserviceable before the time of restoration, and prior to the limit on backfill responsibility as described in Section 6. of these rules, it must be removed and replaced at the permittee/contractor's expense.

- **9.5.9.** Saw cutting: The minimum depth of any saw cut on PCC pavement or on asphalt over PCC pavement shall be such that one-half the thickness of the concrete base is cut. The maximum depth saw cut shall be such that no more than three-fourths (3/4) the thickness of the concrete base is cut. No cutting wheel runout will be permitted beyond the limit of the opening of the cut or on adjacent panels on arterials, bus routes and truck routes. The slurry resulting from the cutting operation shall be contained, collected and disposed at an appropriate disposal site. No such material shall be disposed of in any storm drain system. (See Section 6.1. for reference to construction site drainage control practices.)
- **9.5.10. Saw cutting:** Saw cutting is required except when:
- **9.5.10.1. Exception:** An exception is granted by the Director.
- **9.5.10.2. Full-depth Joint:** Pavement removal extends to a full-depth joint.
- 9.5.10.3. Line Drilling is used:
- **9.5.11. Jackhammers and line drilling:** Use of Jackhammers and line drilling is authorized providing the holes shall be one and one-half (1-1/2) inches in diameter, and the maximum spacing between holes shall be six (6) inches, center to center. The holes shall be drilled perpendicular to the base and completely through the pavement.
- **9.5.12. Direction of cuts:** Cuts shall be made parallel and/or perpendicular to longitudinal and transverse joints.
- **9.5.13.** Cut enlarged by City: If the cut conforms to the above rules and the Department removes additional pavement, the replacement of the additional portion of the panel shall be at the expense of the Department. Note: The application of these rules may sometimes require the replacement of more than forty percent (40%) of a pavement panel requiring full panel replacement, even though the initial cut itself covered less than forty percent (40%).

9.6. PCC PAVING:

- **9.6.1. Thickened edges:** Thickened edges and/or keyed thickened edges at construction joints shall be constructed in full panel replacements of less than ten (10) inches in thickness. See Appendix C and D for detail.
- **9.6.2. Class of Concrete:** The class of concrete for street pavement restoration shall be PCC Class 6.5 (1-1/2) (H.E.S., whenever required by the Director).

9.6.3. PCC pavement thickness are as follows:

- a. Central Business District twelve (12) inches or match existing if greater.
- b. Bus routes and loading zones twelve (12) inches or match existing if greater, or as determined by an approved pavement thickness design.
- c. Non-arterials Residential (except bus routes) six (6) inches or match existing if greater.
- d. Non-arterials Commercial (except bus routes) ten (10) inches or match existing if greater.
- e. All other arterials except bus routes nine (9) inches or match existing if greater.
- **9.6.4.** AASHTO design requirement: The Director may require a pavement thickness design per

AASHTO (American Association of State Highway and Transportation Officials) standards, if the extent of pavement replacement is substantial.

- **9.6.5. Color and finish of concrete:** Pavement surface shall be given a uniform, gritty texture true to grade and cross section. Final surface shall be a burlap, brush or other acceptable treatment in accordance with Standard Specifications, Section 5-05.3(11)E. The use of lampblack or other coloring agents may be required, in amounts prescribed by the Director, to match the adjacent pavement as closely as possible.
- **9.6.6. Surface Smoothness:** The surface smoothness shall be checked with a straightedge 10 feet long, mounted to a long handle to permit operation from outside the pavement. At the conclusion of the finishing operation, the surface of the pavement shall not vary from a true surface when tested with a 10-foot testing straightedge, more than 1/8 inch in 10 feet on arterials, 1/4 inch in 10 feet on residential streets, 3/8 inch in 10 feet in alleys, 3/8 inch in 10 feet in concrete bases, and 1/8 inch in 10 feet in concrete bases for unit pavers. In no case shall the grade in the gutter be such that it will allow ponding of water. If the surface smoothness of the pavement after curing is found to exceed the tolerance permitted, the high spots shall be ground until they meet tolerance. If the surface tolerance cannot be met satisfactorily by grinding, the pavement shall be removed and be replaced in conformity with the Specifications. (See Standard Specifications, Section 5-05.3(12) for additional requirements.)

9.7. ASPHALT PAVING - RIGID BASE:

GENERAL:

- **9.7.1. New asphalt pavement:** New asphalt pavement shall not be cut for at least three (3) years following the finishing of the paving, except in an emergency or when prior approval has been granted by the Director.
- **9.7.2. PCC rules to be used:** Where possible, all rules governing PCC pavement (Section 9) removal and repair shall apply to asphalt/rigid base pavement panels. (Refer to Appendix E. and F. for details.)

9.8. REMOVAL:

- **9.8.1. Asphalt cutting wheels:** When cutting asphalt, the cutter shall cut completely through the asphaltic surfacing.
- **9.8.2.** Visible joints and cracks: Section 9 shall govern panel cuts and replacement. If joints or cracks show through the surface on asphalt/rigid base pavements, the same rules apply as though the surface were concrete. (See Section above.) If no joints are visible or their locations cannot reasonably be determined before or after excavation, no additional removal will be required.
- **9.8.3.** "T" Cut: The asphalt overlay shall be removed for a minimum of 12 inches from each side of the utility cut. If this "T" cut is not done by the permittee/contractor, Seattle Transportation will levy an additional charge for the actual work done to remove and dispose of the additional asphalt overlay.
- **9.9. RESTORATION:** Refer to Section 9 for restoration of PCC panels. The patch to the existing rigid base (PCC, brick, etc.), must be even with the top surface of the rigid base. The concrete base repair will be done per standard specification. Texturing of the concrete will not be allowed. In the instance where the rigid base is more than eight (8) inches below the street surface, the base material may be poured to a level of eight (8) inches below the top surface of the street or as directed by the Director. (See Appendix E. and F.) Curing compounds containing wax(es) are not allowed.
- **9.9.1. Asphalt pavement wearing course mix:** The class of asphalt mix for permanent street pavement restoration shall be "Class A" asphalt per Seattle Standard Specifications.

9.9.2. Asphalt overlay paving less than three (3) years old:

- **9.9.2.1.** The minimum width of the replacement overlay shall be the full lane width on multiple lane roadways and to the center line on two lane roads. The length of replacement shall be the longitudinal length of the cut or trench plus twelve inches (12") at both ends. In all cases the top of base pavement must be exposed a minimum of twelve inches (12") from all edges of the opening.
- **9.9.3.** Longitudinal Trenches Equal To Or Greater Than Two Hundred Forty (240) feet in length: Restoration shall be full lane width, as determined by the Director, for the entire length of the trench. A self-contained, power-propelled asphalt paving machine with an activated screed or strike-off assembly, capable of spreading and finishing asphalt material shall be used. Prior to paving the lane, the asphalt outside the trench shall be removed by cold planing (grinding) the asphalt down a minimum of two (2) inches or to the surface of the base, whichever is less. Note: When the base pavement is greater than two (2) inches below the finished surface, the trench area shall be preleveled with the same class of asphalt as the wearing course.

9.9.4. Surface Smoothness:

- a. The completed surface of all courses shall be of uniform texture, smooth, uniform as to crown and grade, and free from defects of all kinds. The completed surface of the wearing course shall not vary more than 1/8 inch from the lower edge of a 10-foot straightedge placed on the surface parallel to the centerline. The transverse slope of the completed surface of the wearing course shall vary not more than 1/4 inch in 10 feet from the rate of transverse slope shown in the construction plan.
- b. When deviations in excess of the above tolerances are found, the pavement surface shall be corrected by the addition of asphalt concrete mixture of an appropriate class to low places or the removal of material from high places by grinding with an approved grinding machine, or by removal and replacement of the wearing course of asphalt concrete. Correction of defects shall be carried out until there are no deviations anywhere greater than the allowable tolerances.
- c. In all areas in which the surface of the completed pavement deviates more than twice the allowable tolerances described above the surface wearing course shall be removed and replaced to the satisfaction of the Director.
- d. Castings, such as inlets, access holes, valves chambers, meter boxes, monument cases, etc., shall be adjusted to finish grade prior to construction of the final wearing course. (Standard Specification, Section 5-04.3 (9) & 5-04.3 (13).) Any casting and/or lid which is worn or broken will be replaced prior to the installation of the final wearing course.
- **9.9.5. Older asphalt pavement:** Prior to restoration of a street with paving older than three (3) years, the existing asphalt surfacing abutting the trench line or cut shall be cut back a minimum of twelve (12) inches to completely expose the existing rigid base. (See Appendix E for detail.)

9.10 <u>ASPHALTIC SURFACE/FLEXIBLE BASE OR DEEP STRENGTH ASPHALT STREETS AND OTHER TREATED SURFACES:</u>

- **9.10.1. GENERAL:** General provisions of Section 9.5., 9.7., 9.8. and 9.9. shall apply where applicable.
- **9.11. REMOVAL:** Cuts shall be square with cuts parallel and perpendicular to the center line of roadway. When pavement is removed, the remaining edge shall be neat, straight, and perpendicular to the base.

- **9.11.1. Asphalt Cutting Wheels:** When asphalt cutting wheels are used, the cutter shall cut completely through the asphaltic surfacing.
- 9.12. RESTORATION: Sections 7., 8. And 9. shall apply.
- **9.12.1. Enlargement of cut:** Any cut less than three (3) feet from the edge of the pavement will require the removal and restoration of that portion of pavement between the edge of the roadway and the cut.
- **9.12.2. Minimum patch:** The minimum width or length of a patch shall be three (3) feet. If the patch is at the edge of the pavement, the patch shall be expanded to a minimum of three feet in width.
- **9.12.3. Minimum asphalt thickness:** The following is the minimum surface thickness placed on a base application described in Section 9.5.2.
- a. Non-arterials Residential: Asphalt roadways shall be restored with a minimum surface thickness of three (3) inches of Class A asphalt or to match the thickness of the existing material, whichever is greater.
- b. Central Business District and Principal Arterials two (2) inches of Class A asphalt over eleven (11) inches of ATB* or to match existing if greater.
- c. Bus routes and loading zones-two (2) inches of Class A asphalt over nine (9) inches of ATB* or to match existing if greater.
- d. Non-arterials Commercial (except bus routes) two (2) inches of Class A asphalt over seven (7) inches of ATB* or to match existing if greater.
- e. All other arterials two (2) inches of Class A asphalt over seven (7) inches of ATB* or to match existing if greater. * ATB may be substituted with Class E asphalt material.
- **9.13. Sub-base:** The surface restoration shall be placed over a minimum of six (6) inches of compacted crushed rock base (Mineral Aggregate Type 2.) or other approved material. Recycled crushed concrete pavement may be used, providing it meets the fracture and grading requirements for mineral aggregates of the type specified. Additional pavement removal is required similar to the provisions in Section 9.8.

10. SHOULDERS OF THE ROAD, OIL-MAT/GRAVEL OR STABILIZED AND SEAL COATED ROADWAY SURFACES:

10.1. GENERAL: Provisions of Sections 7., 8. and 9. shall apply. Private improvements in the right-of-way shall be safeguarded. (See Section 11.5.3.)

10.2. RESTORATION

10.2.1. Surface restoration:

- a. Shoulders of roadway: The restoration of unimproved shoulders of the roadway shall be patched with crushed rock (Mineral Aggregate Type 1 or 2 or other approved material) to a compacted depth of four (4) inches.
- b. Untreated road surface: Untreated road surface (crushed rock, gravel or oil-mat surfaces) shall be resurfaced with a minimum of two (2) inches of crushed rock base (Mineral Aggregate Type 1) or other approved material per Specification 4-04.3(13) and application of a dust palliative treatment per Standard Specification 4-04.3(12).

c. Private Improvements: Private improvements, such as driveways, paved areas, etc. are to be restored to equal or better condition to that prior to construction.

11. PLANTING STRIPS AND UNIMPROVED RIGHTS-OF-WAY:

11.1. GENERAL

- a. Where construction activity is within areas identified or serving as natural open spaces, or in planted or otherwise improved right-of-way, the work shall be conducted to minimize removal or damage to vegetation and all associated improvements.
- b. DCLU Environmentally Critical Areas policies and regulations may apply based on the extent of impacts to vegetation or slope stability.
- c. Private improvement in the right-of-way shall be safe-guarded and restored to prior condition unless authorized by the Director.

11.2. RESTORATION

- **11.2.1.Erosion control (non-vegetative):** Surfaces damaged by construction may be required to be resurfaced with crushed rock or other erosion control material approved by the Director.
- **11.2.2.Erosion Control (vegetative):** Where existing vegetation is disturbed by the work, restoration shall be required to provide permanent erosion control that meets or exceeds the value of the material removed (or damaged) as approved by the Director.
- 11.2.3.Trees: Work in the right-of-way area within the dripline of an existing tree or trees must be must be undertaken to minimize damage to the tree(s). i.e.--Tree trimming shall not be allowed without prior approval and shall be permitted only where necessary to minimize damage or otherwise mitigate impacts. Trenching or augering shall not be allowed within 5' of the trunk without specific field approval from the City. Any such excavation requires hand-work with all roots 2" or larger in diameter being retained intact. Tree protection requirements such as trunk wrap, tie-up of low limbs, installation of construction fencing, application of a 4-6" layer of mulch or use of rigid boards/steel plates over root zone areas may be required where construction activity occurs within the dripline.
- **11.2.4. Public and Private improvements:** Improvements, such as plantings, irrigation systems, paving treatments, driveways, etc., are to be restored to equal or better condition than that existing prior to construction unless otherwise directed. Mitigation requirements for removed or irreparably damaged trees and specimen shrubs shall be set according to the "Guide for Establishing the Values of Trees and other Plants" prepared by the Council of Tree and Landscape Appraisers, current edition.

12. ALLEYS: (including alley approaches):

- **12.1. GENERAL:** Provisions of Sections 6., 7., 8. And 9. shall apply.
- **12.2. RESTORATION:** Provisions of Section 7., 8. And 9. and Standard Plan "Type 430.1 Driveway" shall apply.
- **12.2.1. Erosion control:** Unimproved rights-of-way shall be required to be replanted or to have other erosion control measures constructed.

12.2.2. Pavement thickness: PCC pavement thickness shall be six (6) inches thick or to match existing pavement, whichever is greater. Asphalt pavement thickness shall be a minimum of three (3) inches of Class A asphalt over six (6) inches compacted crushed rock or to match existing if greater.

13. STANDARD CONCRETE SIDEWALKS:

- 13.1 GENERAL: All removal and replacement of walks shall be to the nearest scribe line or joint.
- **13.2. REMOVAL OF CURBS AND WALKS AT INTERSECTIONS:** The removal of three (3) or more lineal feet of curb or twelve (12) or more square feet of the walk at the intersection, will require the installation of curb ramp(s), in accordance with Standard Plans 422.1a and 422.1b. (See the Seattle Transportation Curb Ramps Pamphlet and Appendices H. and I.)
- **13.3.** Walk condition prior to construction: If the sidewalk adjacent to a cut was damaged prior to construction, it shall be removed and replaced as required by the Director, but removal and replacement shall in no case be required farther than the nearest expansion joint or the nearest scribe mark that is at least five (5) feet beyond the opening.
- **13.3.1. Damage during construction:** Any walk area damaged by a permittee/contractor during the course of operations shall be removed and replaced to the extent prescribed by the Director, at the permittee's/ contractor's expense. The Director's decision as to the extent of restoration shall be final.
- **13.3.2. Trenching along damaged walk:** A permittee/contractor, doing work immediately adjacent to a standard concrete walk that was damaged prior to or during construction, shall be required to replace the damaged walk, full width, for the length of the project pursuant to Section 13.1.1. above. Such permittee/contractor must bear the entire expense of such replacement or negotiate with the adjoining property owners prior to construction and arrange at that time to share the expense with the property owners.
- **13.3.3. Protection of immediate area:** All walkway areas and associated amenities including but not limited to pavers, tree grates, and plantings in tree pits or planting strips shall be protected from equipment damage as required by Seattle Municipal Code Title 15 or as otherwise directed. Sidewalk removal within the dripline of trees shall be executed with care to prevent equipment damage to roots exposed beneath the pavement.
- **13.3.4.** <u>CUT:</u> Location of cuts: Openings in concrete sidewalks shall be made by saw cutting at the scribe marks or joints and trimmed so that the margin lines of the patch will form a rectangle with straight edges and vertical faces.
- **13.3.5. Under-cutting of walk:** Under-cutting of walks is not permitted. Such excavation shall require replacement of the walk. See Section 13.4. Backfill for exception.
- **13.3.6. Patch in walks supported on all sides:** Minimum width of all longitudinal cuts for repair shall be two (2) feet, or expanded to the nearest scribe line, providing the concrete walk repair is bounded on each side by other properly placed concrete or asphalt pavement or other improvements that will prevent the pavement from shifting.
- **13.3.7. Patches in walks not supported on all sides:** Concrete walk shall be removed so that no panel is less than four (4) feet in width, unless the concrete walk replaced or remaining is bounded on each side by other properly placed concrete or asphalt pavement or other improvements that will prevent the concrete walk from shifting. Any remaining panel less than two (2) feet in width, regardless of support, shall be replaced in its entirety.

- **13.3.8.** Patches in eight (8) foot walks with support on one side: Concrete walks eight (8) feet or more in width bounded on one side by earth planting strip and on the other side by curbing, buildings or walk (concrete or asphalt) that will prevent movement of the remaining pavement, shall be removed so that the pavement remaining on the side bounded with earth shall be at least four (4) feet in width and the pavement remaining on the side bounded by curbing, building or other pavement shall be at least two (2) feet in width.
- **13.3.9. Patches in eight (8) foot walks and less not supported on any side:** Concrete walks less than eight (8) feet in width bounded on both sides by earth planting strips shall be entirely removed and replaced.
- **13.3.10. Additional pavement removal:** A concrete walk between the edge of an opening and a transverse expansion joint or scribe line shall be removed and replaced.
- **13.3.11. Emergency pavement removal:** In emergency situations, concrete breakers will be permitted to break concrete sidewalks. However, edges of openings must be saw trimmed before repair.
- **13.4. Curb Ramps:** See Section 15. for curb ramp requirements.
- **13.5. RESTORATION:** Provision of Sections 6., 7., 8. And 9. shall apply where applicable.
- **13.5.1. Thickness of Concrete Walks:** The concrete walk thickness shall be pursuant Standard Plans 4.20.1., 4.21.1. and 4.30.1. Residential driveways shall be six (6) inches in thickness and commercial driveways and alley approaches to be a minimum of eight (8) inches thickness. The required thickness of pavement may necessitate root pruning of trees. Increase in tree pit size/planting strip width or variation in sidewalk grade may be requested by the City to minimize the impact to the tree roots. Any changes in sidewalk configuration or grade shall be subject to approval by the City prior to execution of the restoration work. Where cutting of roots is allowed by the City, proper pruning procedures shall be followed as directed to minimize damage to the tree.
- **13.5.2.** Coloring Concrete: The use of lampblack or other coloring agents may be required, in amounts prescribed by the Director, to make the replacement walk match the adjacent existing sidewalk. Coloring agents are not permitted in curb ramps.
- **13.5.3. Asphalt pathways:** Existing asphalt pathways or walks shall be replaced with a minimum thickness of two (2) inches of asphalt. Minimum thickness of all vehicular crossings shall be three (3) inches of asphalt. Note: See Appendix G. for sketches clarifying the above rules.

14. PAVEMENT REMOVAL - DECORATIVE/SPECIAL PAVEMENTS AND SIDEWALKS:

- **14.1. GENERAL:** Provision of Sections 6., 7., 8., 9., 12., and 13. shall apply where applicable.
- **14.1.1. Source of supply:** Replacement materials identical to the removed materials must be on the job site or in the permittee/contractor's possession prior to the start of the work. If no source can be located, an equivalent substitute may be considered.
- **14.1.2. Photographs shall be taken:** The permittee/contractor shall take photographs of all decorative/special pavements prior to removal to aid in restoration, unless photographs are not required by the Director.
- **14.1.3. Mortared decorative/special pavement:** All mortared decorative/special sidewalks or street pavement (e.g. brick, cobble-stone, paver blocks, etc.) shall be removed at a joint with the intent of

salvaging as many units as possible, unless the Director indicates there is no requirement to reuse the material.

- **14.1.4. Secured storage:** Secure storage for salvaged materials shall be provided.
- **14.1.5.Tunneling:** Tunneling may be required at the discretion of the Director.
- **14.1.6.** Decorative paving restoration: Any cobblestone and other special or decorative surfaces, including curbs and/or gutters, base and sub-base, shall be restored to match original construction conditions and appearance. This restoration may entail additional pavement removal as directed by the Director.

15. CURB RAMPS:

- **15.1. CURB RAMP REQUIREMENTS:** Curb ramps must be installed any time three (3) or more feet of existing curb or more than twelve (12) square feet of the sidewalk is being removed and replaced within the area bounded by lines that are the production of the right-of-way lines (property lines) at an intersection. Ramps required by RCW 35.68.075 shall be installed according to Standard Plan 422. Exception is noted in 15.1.2.d. (See Appendix I and Seattle Transportation's Curb Ramps pamphlet.) Note: All curb ramps must meet current ADA Guidelines. If assistance is needed in determining location and/or configuration of curb ramps, call Seattle Transportation's Pedestrian Coordinator at 206-684-5108.
- **15.1.1. Companion ramps:** Companion curb ramp(s) shall be installed on the opposite side of the street from any new curb ramp, unless there is no existing curb or sidewalk on the opposite side of the street. If only curbs exist, then the curb shall be depressed in the same manner as if a ramp were being built. If the initial ramp is being constructed at the mid-point of the arc of the curb, then at least one additional ramp shall be installed at the opposite end of the crosswalk.
- **15.1.2. Guideline for ramp locations:** The following shall be used when planning, designing or constructing curb ramps:
- a. Preferred location: The permittee/contractor shall attempt to locate the ramp as shown by priority #1 on the Standard Plan No. 422.1b. (Appendix I). If that location is not feasible due to utility location or other conflicts, then an alternate location shall be chosen in descending priority order.
- b. Utility conflicts: Utility and other street furniture items which conflict with the preferred ramp location should be relocated if such can be done for One Thousand Dollars (\$1,000.00) or less. Where utility castings are in conflict, they shall be reconstructed to ramp grade or relocated.
- c. Utility clearance: Minimum lateral clearance from utility poles, hydrants, traffic signals hardware or above grade obstacles shall be one (1) foot to the scored portion of the ramp.
- d. Cross slopes: Where the cross slope of the ramp (or street grade) is six percent (6%) or greater, alternative locations for ramps should be sought.
- e. Adjacent driveways: Where property access driveways exist or are planned to be constructed as part of a street or side walk construction project, and any portion of the driveway immediately abuts (touches) or overlaps the preferred curb ramp location, said driveway may serve as the curb ramp for that location. The driveway shall be constructed, or if existing, it shall be shimmed, (a minimum of six (6) feet of the driveway which is closest to the corner), to be flush with the adjacent roadway surface. In locations where a new or existing driveway serves as the required new curb ramp, the companion ramp (15.1.1) shall still be required. Repair or replacement of an existing driveway only, or installation of a new driveway only, shall not be construed as requiring a curb ramp on the opposite side of the street.

f. Curb ramp landing areas: Minimum size of the concrete walk behind the ramp shall be three (3) feet by four (4) feet (desirably 3'x5'). (See Appendix H. and I.)

16. <u>ACCESS HOLES AND UTILITY POLE INSTALLATION REPAIRS IN ALLEYS AND SIDEWALKS:</u>

16.1. GENERAL: Provisions of Sections 6., 7., 12. and 13. shall apply.

17. STREET USE APPEAL PERMITS:

17.1. APPEALS MADE TO THE DIRECTOR OF SEATTLE TRANSPORTATION: All decisions made by the Director of Seattle Transportation or the Traffic Engineer may be appealed to the Director's Administrative Review Officer pursuant to SMC 15.90.030. The appeal is to be made on an appeal from, available from Seattle Transportation, to:

Director c/o Seattle Transportation Suite 400, Seattle Municipal Building 600 Fourth Avenue

Seattle, Washington 98104

17.2. TIME FOR FILING AN APPEAL: An applicant, permittee, or interested party must file an appeal within ten (10) working days after the decision of the Director. The Administrative Review Officer shall hear the appeal within a reasonable period. (SMC 15.90.030)

(For further information, call Seattle Transportation's Street Use Section, phone 684-5253.)

APPENDIX A.

PAVEMENT MARKINGS

PAVEMENT OPENING AND STREET MARKING IDENTIFICATION

<u>UTILITY</u>	IDENTIFICATION LETTERS	COLOR
CATV	TV	Orange
City Light	\mathbf{CL}	Red
Engineering Maintenance	${f E}$	Green
Gas	\mathbf{G}	Yellow
Metro Sewer	D	Green
Metro Transit	M	Red
Petroleum	O	Yellow
Sewer Utility	\mathbf{SU}	Green
Side Sewer	SS	Green
Steam	${f S}$	Yellow
Street Light	\mathbf{SL}	Red
Telephone	T	Orange
Traffic Control	TR	Red
Utility Permit	UP	Green
Water	\mathbf{W}	Blue
Western Union	$\mathbf{W}\mathbf{U}$	Orange

- 1. White shall be used for marking location in street area for proposed excavation. The Cuts shall be marked prior to contacting One-call.
- 2. Identification letters shall be placed adjacent to the street opening, or, on the face of the nearest curb, in line with the cut.
- 3. Identification letter and color coding shall also be used for marking existing utilities in the street area.
- 4. The paint shall be of a quality that will last at least sixty (60) days.
- 5. An alternative to painting and/or special care shall be taken when marking decorative streets and sidewalks.

APPENDIX B.

BACKFILL MATERIALS SPECIFICATIONS

Controlled Density Backfill (CDF) Type 1: (typically for Pipe Bedding)

		Sp. Gr. Yield, Cu. ft.	
Portland Cement Type I-II	94 pounds/cubic yard	3.2	0.47
Fly Ash	300 pounds/cubic yard	2.247	2.14
Sand, Type 7	2800 pounds/cubic yard	2.48	18.09
Water	300 pounds/cubic yard	1.00	4.80
Air Entrainment	10 Oz/cubic yard	-	2.70

3394 Lbs Total 28.20

Slump 7-inches maximum

Unit Weight = 120.4 lbs/cu. ft.

Controlled Density Backfill (CDF) Type 2: (typically for trench backfill)

		Sp. Gr. Yield, Cu. ft.	
Portland Cement Type I-II	30 pounds/cubic yard	3.2	0.15
Fly Ash	300 pounds/cubic yard	2.247	2.14
Sand, Type 7	2860 pounds/cubic yard	2.48	18.48
Water	300 pounds/cubic yard	1.00	4.80
Air Entrainment	10 Oz./ cubic yard	-	2.70

3490 lbs Total 28.27

Slump 7-inches maximum

Unit Weight = 123.5 lbs/cu.ft.

Note: Batch weight may vary depending on the specific weights of the aggregates.

Proposals for other formulas for CDF must be submitted to the City of Seattle's Materials Laboratory for Approval.

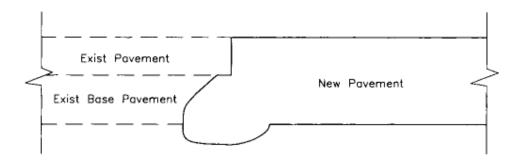
Slurry Bedding Sand: The slurry sand (#1 mix) shall meet the requirements of #2 sieve size as shown below and contain 30 gal (+0, -0.5 gal.) of water per cubic yard.

GRADATION FOR SLURRY AGGREGATE MATERIAL

	Percent Passed	By Weight	
Sieve Size	Sand	#1 Stone	#2 Stone
2''			100%
1-1/2''			90-100%
1"		100%	20-55%
3/4''			0-15%
1/2''		20-55%	0-5%
3/8''	100%	0-5%	
No. 4	95-100%	0-3%	
No. 8	45-80%		
No. 16	7-30%		
No. 50	7-30%		
No. 100	0-6%		
No. 200	0-2.5%	0-1%	

^{*} Flyash may be added to the above mixtures, in a proportionate amount, to increase flowability. <u>Crushed rock:</u> Type 2 material meeting standard specifications 9-03.16.

APPENDIX C. CONCRETE PANEL PATCH DIAGRAM

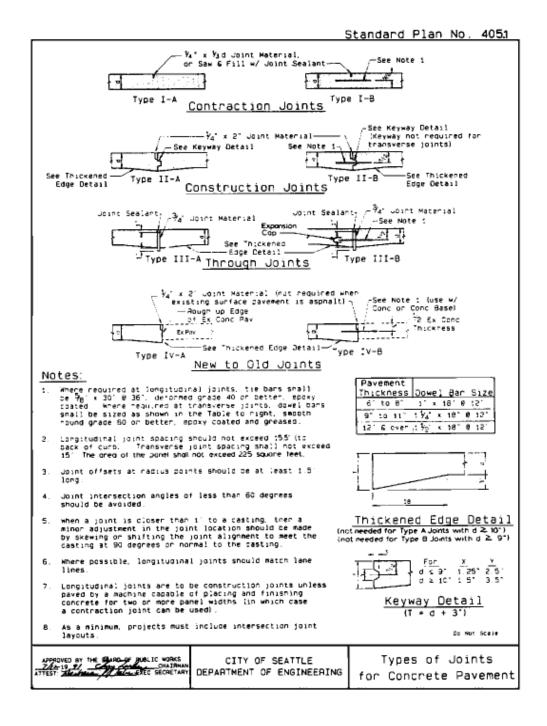


Remove all loose pieces of base pavement after removal of adjacent panel. Loose pieces are defined as any of base pavement which is easily dis lodged by hand, bar, pick or shovel. New concrete shall be mechanical ly vibrated to insure the area of undercutting is completely filled.

Base Pavement Undercut

APPENDIX D.

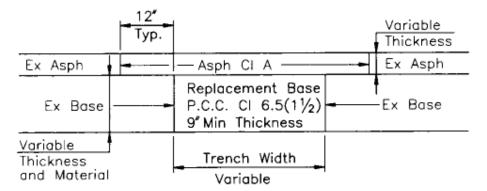
CONCRETE JOINT DIAGRAM



APPENDIX E.

ASPHALT OVER RIGID BASE PATCH

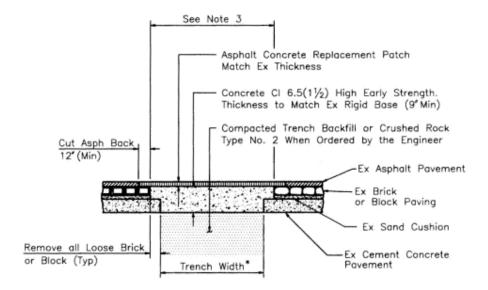
Prior to pouring concrete base, trim ex asph 6" from trench lines.



Typical Restoration - Asphalt Over Rigid Base

After asphalt is placed, compacted and while still warm, seal joint with special tack coat(STE-1) and cover with clean dry sand per Section 5-04-3(11)B of the Standard Specification.

APPENDIX F.



Asphalt over Rigid Base of Brick or Stone Block Pavement

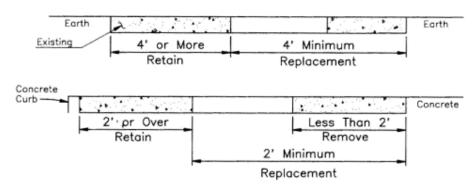
Notes:

- When a stone or brick pavement is overlayed with asphalt, the street surface pavement becomes an asphalt street over rigid base.
- If a stone or brick pavement is not overlayed, the method of restoration is in kind.
- * Includes zone of influence

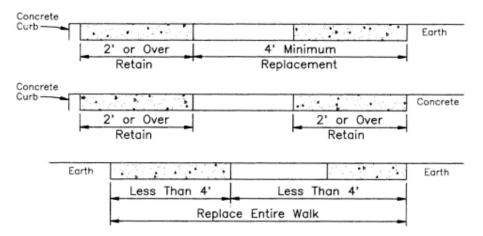
APPENDIX G.

CONCRETE WALKS

Detail 1: Concrete Walks 8' Wide & Greater



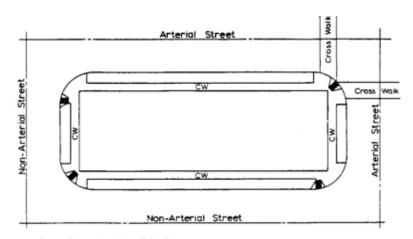
Detail 2: Concrete Walks Less Than 8' in Width

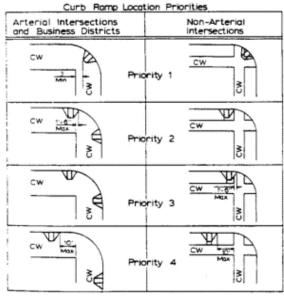


Cross—section cuts shall be made at the scribe marks. Minimum width of longitudinal cuts shall be 2'.

APPENDIX H.

CURB RAMP LOCATION DETAIL STANDARD PLAN 422.1a



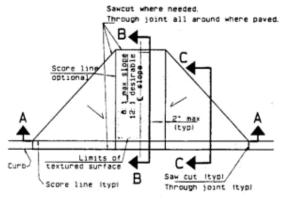


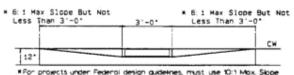
Note:

- All signalized intersections and 4-way stop intersections shall be treated as arterialarterial. When two arterials intersect and the major arterial does not stop, then the street that does stop (the minor arterial) shall be treated as a non-arterial and only one reap shall face the minor street.
- Curb remps shall be installed on the opposite side of the street from any remp being constructed.
- Curb shall be depressed for future curb ramps where curbs are installed with no sidewalks.
- Designer/ Installer shall locate ramp in priority 1 location. If not feasible, then an alternate location shall be chose: in descending order (75.1 BPW Policy)
- For additional requirements and conditions refer to Seattle Board of Public Works Curb Reep Placement Policy adopted June 25, 1980 and Standard Plan No. 422.10

APPENDIX I.

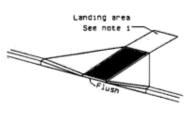
CURB RAMP LOCATION DETAIL STANDARD PLAN 422.1b

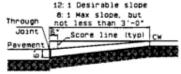




Section A-A

- Sidewalk paving in the planting strip or at the back of the sidewalk shall be installed as necessary to make the ramp accessible to CW landing and provide a flat landing area at the top of the ramp (3'x 4'min).
- The curb ramp shall not be poured integral with the sidewalk or pavement and shall be isolated by through joint material on all sides.
- The sidewalks thickened edge shall be continued through the wing of the curb ramp.
- The center ramp section concrete shall have a coarse textured surface obtained by a 3/4°9-ii flattened expanded metal mesh being pressed into the still fresh concrete. The long axis of the diamond pattern shall be perpendicular to the curb. The triangular wing sections shall have a slightly brushed finish, parallel to the curb.
- Hinimum distance between adjacent curb ramps shall be 6 feet.
- Inlets shall be so located that runoff does not flow past the curb ramp.
- Minimum lateral clearance from inlets, poles, hydrants, and other above ground obstacles shall be 1 foot to the scored portion of the ramp.
- For additiona) requirements and conditions refer to the Seattle Board of Public Works Curb Ramp. Placement Policy adopted June 25, 1980 and Standard Placement Policy adopted June 25, 1980 and Standard





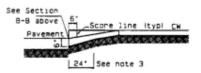
Section B-B INSTALL WITH NEW PAVEMENT

Curb monolithic with ramp. New povement blocked out full depth



Section B-B INSTALL IN EXISTING PAVED AREAS

Curb monolithic with ramp. Existing povement removed of foce of curb



Section C-C Ref. Std. Spec. Sec. 8-14

APPENDIX J.

H-20 LOADING CHART

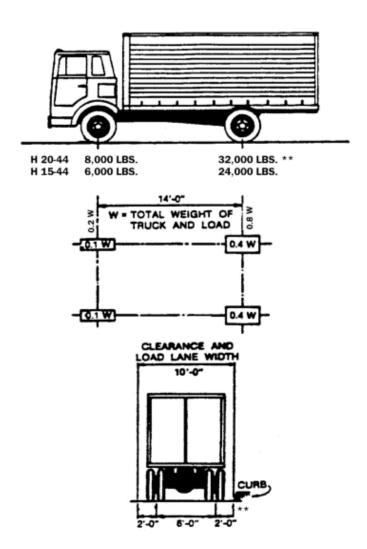


Figure 3.7.6A Standard H Trucks

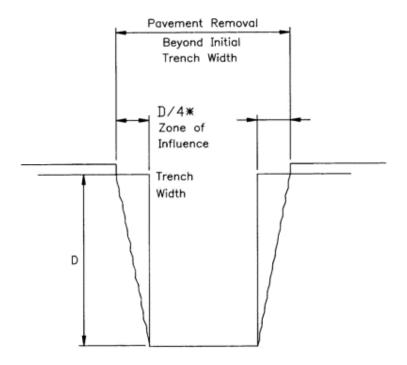
^{*} In the design of timber floors and orthotropic steel decks (excluding transverse beams) for H-2O loading, one axle load of 24,000 pounds or two axle loads of 16,000 pounds each spaced 4 feet apart may be used, whichever produces the greater stress, instead of the 32,000-pound axle shown.

^{**} For slab design, the center line of wheels shall be assumed to be 1 foot from face of curb (See Article 3.24.2.).

APPENDIX K.

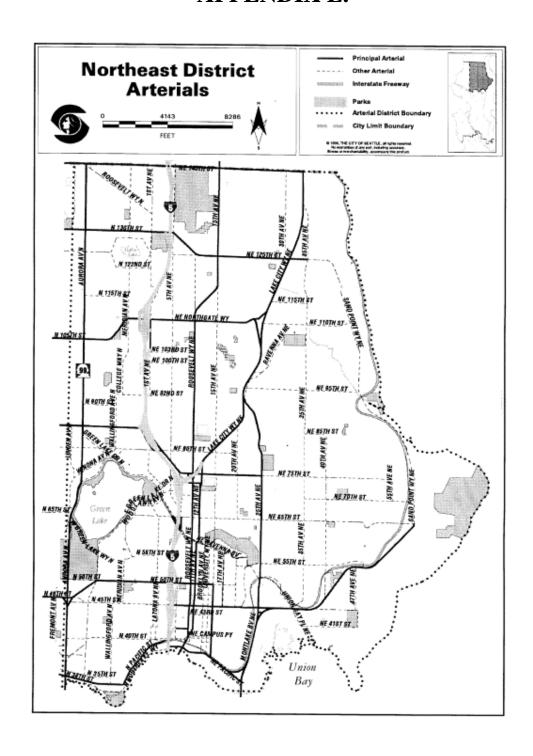
ZONE OF INFLUENCE

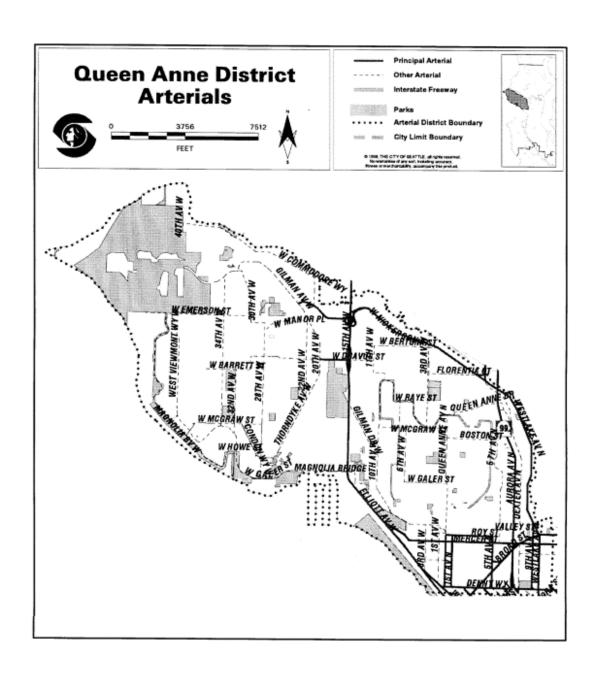
The zone of influence is dependent on soil type and construction method. The amount of pavement removal that may be required to allow for adequate re-compaction of the soil adjoining the excavation is based on the estimate of soil movement resulting from the installation of the utility.

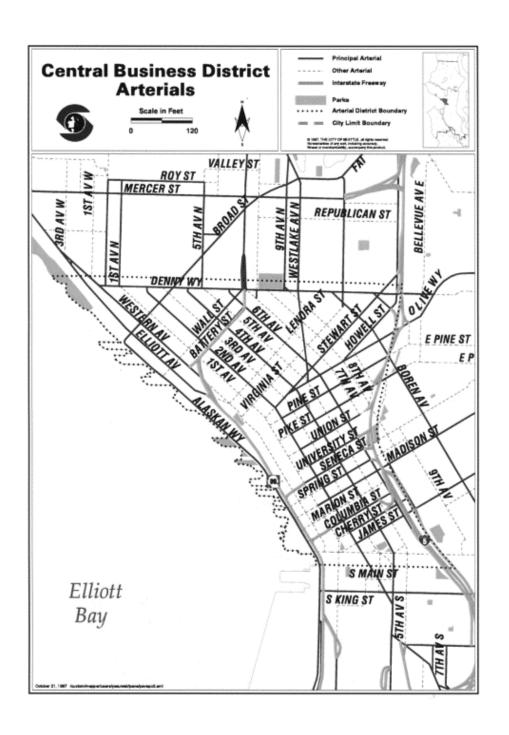


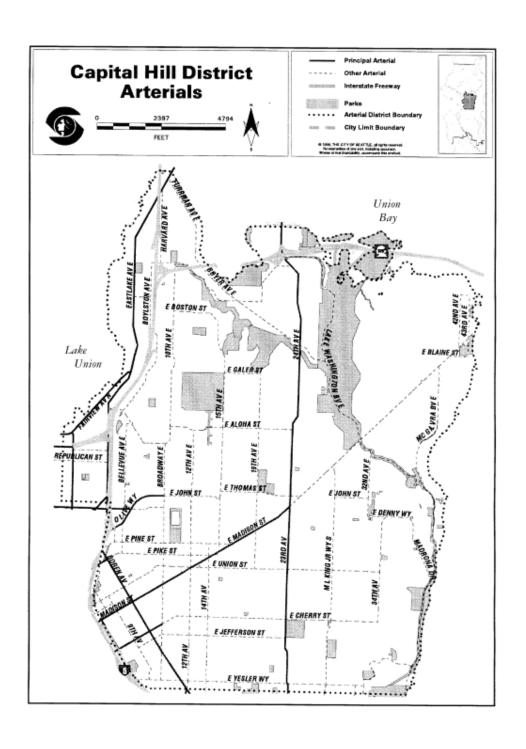
 Zone of influence is dependent on the type and condition of the adjacent soils.

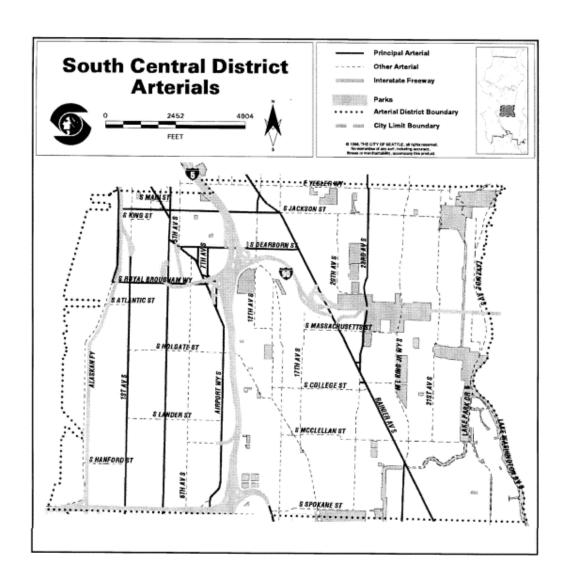
APPENDIX L.

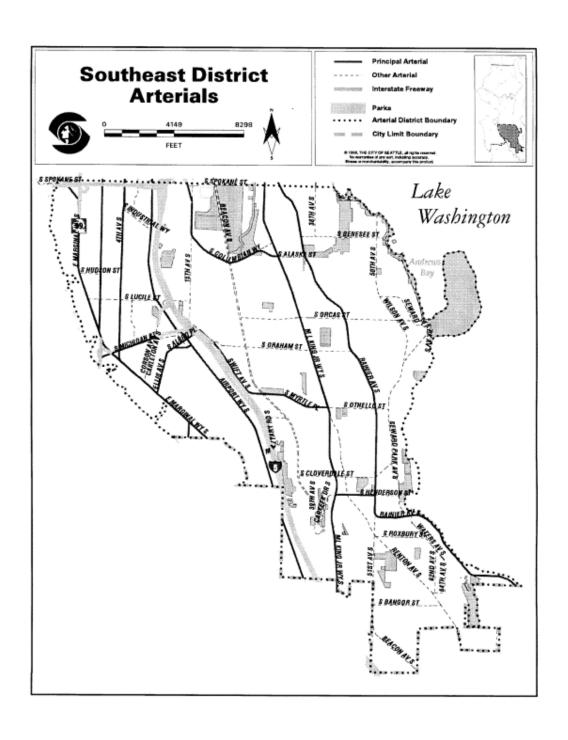


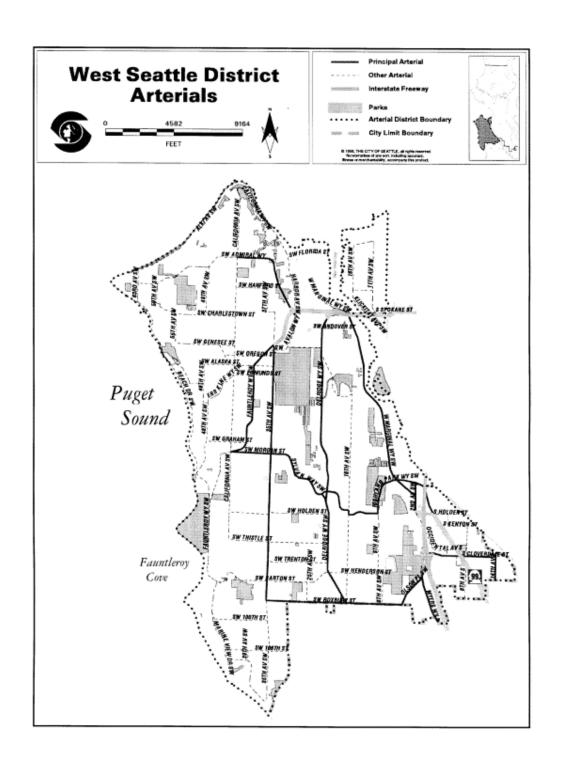












APPENDIX M.

DISTRESSES ALLOWABLE IN AN EXCELLENT PANEL

ONE DISTRESS PER PANEL

Distresses	Severity	Code	Deduct	PCI
Patching, Small	medium	30 M	15	85
Patching, Small	low	30L	4	96
Polished Aggregate		31	9	91
Popouts		32	14	86
Scaling	low	36L	11	89
Shrinkage Cracks		37	4	96
Spalling, Corner	low	38L	14	86
Spalling, Joint	low	39L	12	88
TWO or	MORE DISTRESSES	S PER PANE	L	
Distresses			Deduct	PCI
30L + 31			13	87
30L + 36L			15	85
30L + 37			8	92
31 + 37			13	87
36L + 37			15	85

APPENDIX N.

Historic Preservation Officers:

Ballard Avenue Landmark District:	Jennifer Meisner	684-0227
Columbia City Landmark District:	Patricia Lee	684-0226
Harvard-Belmont Landmark District:	Beth Chave	684-0380
International Special Review District:	Patricia Lee	684-0226
Pike Place Market Historical District:	Tom Quackenbush	684-0229
Pioneer Square Preservation District:	Jennifer Meisner	684-0227
Fort Lawton Landmark District:	Beth Chave	684-0380

APPENDIX O.

City of Seattle Legislative Information Service

Information updated as of February 9, 1998 10:53 AM

COUNCIL BILL NUMBER: 111895

ORDINANCE NUMBER: 118751

AN ORDINANCE relating to utility cuts and other openings in City streets, alleys, and other public places for construction or other activities; amending Chapter 15.26 Backfilling and Chapter 15.32 Franchise and Public Utility Permits and Regulations of the Seattle Municipal Code.

Date introduced/referred: Sep 22, 1997 Date passed: Oct 13, 1997 Status: PASSED Vote: 9-0

Date of Mayor's signature: Oct 20, 1997 Committee: Transportation Sponsor: MCIVER

Index Terms: FRANCHISES, STREETS, PERMITS, MAINTENANCE, REPAIR, TRANSPORTATION-DEPARTMENT, ADMINISTRATIVE-PROCEDURES

Note to users:

- {- indicates start of text that has been amended out
- -} indicates end of text that has been amended out
- {+ indicates start of text that has been amended in
- +} indicates end of text that has been amended in

AN ORDINANCE relating to utility cuts and other openings in City streets, alleys, and other public places for construction or other activities; amending Chapter 15.26 Backfilling and Chapter 15.32 Franchise and Public Utility Permits and Regulations of the Seattle Municipal Code.

WHEREAS, the City of Seattle, Washington (the !"City!"), possesses a transportation system that is vital to the economic vitality of the City and the enhancement of the City!'s quality of life and is an important public function; and

WHEREAS, a substantial portion of the City!'s transportation funds go to repairing and rehabilitating the City!'s streets; and

WHEREAS, the City wishes to preserve the investment in its transportation system; and

WHEREAS, utilities, including telecommunication carriers, provide essential services to City residents and businesses, and the rights-of-way are critical to the ability of utilities to provide such services, and

WHEREAS, the City authorizes public and private utilities to work in City streets and rights-of-way to operate and maintain utility services, within the limitations established by State and Federal Law; and

WHEREAS, the work of these utilities can seriously impact the condition and useful life of the City!'s streets: and

WHEREAS, even when restoration standards are met, it is not always reasonably feasible to restore the paved surface to its condition prior to being cut, and some loss of useful life may occur for some types of surfaces; and

WHEREAS, construction in the street rights-of-way can represent an inconvenience and disruption to commerce and the public and citizens may become frustrated with repeated tearing up of City streets; and

WHEREAS, the City Council, with the Mayor concurring, passed Resolution 29587 stating the City!'s intent to review utility cut permit fees and rates paid by public and private utilities to determine if such fees and rates cover the full costs of restoring the street to its original condition and reflect any loss of, or reduction in, the useful life of the street; and

WHEREAS, the aforementioned Resolution directed the Executive to review and propose a policy that would require the street area around utility cuts to be restored to its original condition as quickly and efficiently as possible; NOW, THEREFORE,

BE IT ORDAINED BY THE CITY OF SEATTLE AS FOLLOWS:

Section 1. Chapter 15.26 of the Seattle Municipal Code, entitled Backfilling, is amended to add a new section as follows:

15.26.030 Quality of backfill material

The authorizing official shall require the permit holder to use a select backfill material approved by the Director of Transportation that achieves a level of subgrade support for all temporary and permanent street restorations that prevents settling of the base in relation to the surrounding street area. Section 15.32.050 of the Seattle Municipal Code is amended as follows:

15.32.050 Coordination of Projects and Deferment of Construction

- {+ A. The authorizing official may, in such official!'s reasonable discretion, defer construction or other activity under any permit provided for in this chapter, until such time as such official deems proper in all cases where the public place on which the work is desired to be done is occupied or about to be occupied in any work by the City, or by some other person having a right to use the same in such manner as to render it seriously inconvenient to the public to permit any further obstruction thereof at such time, and in granting such permit, may so regulate the manner of doing such work in order to cause the least inconvenience to the public in the use of such public place; and in all cases any work of the City or its contractors or employees for municipal purposes shall have precedence over all work of every other kind.+}
- {+ B. Beginning by November 1, 1997, and by October 1 of each succeeding year, the Director of Transportation shall provide to all utilities a list of street and other improvements planned for the following three (3) years. All agencies, utilities, franchisees, and City departments planning work in a street, alley, or other public place that will require a permit under this chapter shall submit a list of proposed projects and locations to the Director of Transportation by December 31 of each year. This list shall cover planned projects for the following three (3) years. These lists of planned projects shall be entered into the City!'s Geographic Information System and integrated with other information on street condition and use. The Director of Transportation and the Superintendent of Parks and Recreation shall deny agencies that fail to provide this information permits for construction or other activity under this chapter unless that agency was not timely provided a list of planned street improvements for that year. +}
- {+ C. The Director of Transportation shall establish a Utility Coordinating Committee for the purpose of coordinating street and utility projects to minimize the frequency of street openings and disruption to neighborhoods. This committee shall consist of one (1) management representative each from Seattle

Transportation, Seattle Public Utilities, and Seattle City Light. The Director of Transportation shall invite one representative each from companies that applied in the previous calendar year for a permit under this chapter to serve in an advisory capacity to this committee. The committee shall meet at least twice a year to review and coordinate street and utility projects for the next three (3) years. The committee shall decide which of the submitted projects will be scheduled for the next twelve (12) months, taking into consideration maximizing efficiencies, reducing inconvenience to the public, and avoiding work conflicts in the street rights-of-way; and shall not allow pavement cuts within three (3) years after resurfacing or reconstruction. By March 1, 1998, and by February 1 of each succeeding year, the committee shall develop and publish a Street and Utility Improvement Plan that lists projects it has scheduled for the next twelve (12) months and shall make information available to affected residents, property owners, neighborhood organizations, and businesses about these projects. The committee shall also annually review and comment on the City!'s Pavement Opening Policies and associated fees, charges, inspection costs, and street restoration costs. The Director of Transportation shall propose to the City Council legislation to establish fees and charges by ordinance. +}

- {+ D. Except for activities included in the current Street and Utility Improvement Plan, no permit shall be issued under this chapter for construction or other activity that will commence in the street, alley, or other public place; except, that this prohibition shall not apply to:
- 1. emergency repairs that could not have been anticipated or are necessary for the protection of the public!'s health and safety;
- 2. new or revised service connections that have been requested by a utility!'s customer;
- 3. construction or other activity that will commence in the street, alley, or other public place that does not affect or conflict with other projects in the Street and Utility Improvement Plan or other work anticipated by the City or other permit holders over the next three (3) years;
- 4. or work for which the City!'s denial of a permit would violate federal law. +}
- {+ E. No permit shall be issued under this chapter for work that requires cutting or disturbing the paved surface of any street, alley, or other public place for a period of three (3) years from the completion of resurfacing or reconstruction of that public place; except that this prohibition shall not apply to:
- 1. emergency repairs that could not have been anticipated and are necessary for the protection of the public!'s health and safety;
- 2. new or revised service connections that have been requested by a utility!'s customer; or
- 3. work for which the City!'s denial of a permit would violate federal law. +}
- {+ F. An applicant denied a permit under the provisions of this section may appeal to the Director of Transportation, whose decision in such matter shall be final.
- (+Section 3. A new section is added to Chapter 15.32 of the Seattle Municipal Code, entitled Franchise and Public Utility Permits and Regulations, as follows:

15.32.160 Street restoration requirements.

A. Anyone issued a permit for construction or other activity under this chapter shall temporarily restore the street, alley, or other public place in a manner approved by the Director of Transportation, or as to park drives and boulevards, the Superintendent of Parks and Recreation, within twenty-four (24) hours after completion of the work for which the permit was issued. This requirement of a temporary restoration shall be waived if a permanent restoration is completed in a manner approved by the Director of

Transportation as described in subsections C, D, and E of this section within twenty-four (24) hours after completion of the work for which the permit was issued.

- B. All permanent repairs of a temporary restoration shall be completed within one (1) year after completion of the work for which the permit was issued. If the permittee fails to complete the permanent restoration within this time period and in a manner approved by the Director of Transportation as described in subsections C, D, and E of this section, the Director of Transportation, or as to park drives and boulevards, the Superintendent of Parks and Recreation, may restore the street, alley, or other public place and bill the permittee for the repair as set forth in section 15.26.020. The permittee may, at the time the permit is issued, if the Director of Transportation agrees, contract with the Director of Transportation for completion of the permanent restoration.
- C. Permanent restoration of a concrete street, alley, or other public place shall be completed in a manner approved by the Director of Transportation. Permanent restoration shall include, at a minimum, the following, unless the Director of Transportation determines that the permittee can otherwise make an equivalent restoration of the street, alley, or other public:

For any concrete surface fifteen (15) years old or less or in excellent condition as determined by the Director of Transportation, entire replacement of any concrete panel affected by the construction or other activity is required, except that in the case of a large concrete panel, the Director of Transportation may authorize the panel to be saw cut and require only the affected portion of the panel be replaced.

For any concrete surface where forty percent (40%) or more of a concrete panel is affected by the construction or other activity, entire replacement of any concrete panel so affected by the construction or other activity is required, except that in the case of a large concrete panel, the Director of Transportation may authorize the panel to be saw cut and require only the affected portion of the panel be replaced.

For any other concrete surface, restoration of the area of the panel affected is required.

D. Permanent restoration of an asphalt or asphalt overlay street, alley or other public place shall be completed in a manner acceptable to the Director of Transportation. Permanent restoration shall include, at a minimum, the following, unless the Director of Transportation determines that the permittee can otherwise make an equivalent restoration of the street, alley, or other public place:

For any asphalt surface three (3) years old or less, new asphalt for the length of the cut and width of all lanes affected by the construction or other activity is required.

For any asphalt surface where thirty percent (30%) or more of the width of any lane is affected by the construction or other activity, new asphalt for the length of the cut and width of all lanes affected is required.

For any other asphalt surface, new asphalt for the length and width of the affected area is required.

E. Permittees shall be responsible for any necessary repair of a temporary restoration of a street, alley, or other public place until the permanent restoration is completed. Permittees shall be responsible for any necessary repair of a permanent restoration until the street, alley, or other public place has exceeded its useful life or has been repaved or reconstructed; unless the permittee contracted with the Director of Transportation for the permanent restoration. If the permittee who is responsible fails to complete any necessary repair of a failed temporary restoration within three (3) calendar days or a permanent restoration within thirty (30) calendar days of being notified to do so by the City, the Director of Transportation may complete the repair and bill the permittee for the costs of such repair as set forth in section 15.26.020.

F. In those cases where the Director of Transportation, or as to park drives and boulevards, the Superintendent of Parks and Recreation, has determined that the permittee has not restored the street, alley, or other public place to its condition prior to the commencement of activity under the permit, the permittee shall pay to the Director of Transportation, or as to park drives and boulevards, the Superintendent of Parks and Recreation, a standard charge from a schedule adopted by ordinance reflecting the Director of Transportation!'s estimate of the loss in useful life of the street, alley, or other public place as a result of the construction or other activity. Such charge shall be based on the size of the area affected and the types of surface (concrete, asphalt, or other) and subgrade material of the street, alley, or other public place prior to the commencement of activity under the permit. This charge shall be paid regardless of whether the permanent street restoration is completed by the permittee or by the Director of Transportation. All funds collected from this charge shall be deposited in the Transportation Fund, or as to park drives and boulevards, the Parks and Recreation Fund, and used only for pavement replacement, repair, and maintenance, and not for any other purpose.

{+ Section 4. +} To implement the provisions of this ordinance, the Director of Transportation shall adopt such rules and regulations as he or she deems necessary. Initial rules and regulations should be adopted no later than December 1, 1997.

{+ Section 5. +} Severability. The several provisions of this ordinance are declared to be separate and severable and the invalidity of any clause, sentence, paragraph, subdivision, section, subsection, or portion of this ordinance, or the invalidity of the application thereof to any person, property, or circumstance, shall not affect the validity of the remainder of this ordinance or the validity of its application to other persons, property, or circumstances

Section 6. This ordinance shall take effect and be in force thirty (30) days from and after its approval by the Mayor, but if not approved and returned by the Mayor within ten (10) days after presentation, it shall take effect as provided by Municipal Code Section 1.04.020. Passed by the City Council the 13th day of October, 1997, and signed by me in open session in authentication of its passage this 13th day of October, 1997.

President of the City Council

Approved by me this 20th day of October, 1997.

Norman B. Rice, Mayor

Filed this 20th day of October, 1997.

By: City Clerk